

Customer No.: 31561
Application No.: 10/604,173
Docket No.: 10873-US-PA

REMARKS

Present Status of the Application

Claims 1-15 are pending. The Office Action dated June 28, 2006 rejected claims 1 - 8, 10 - 13 under 35 U.S.C. 102(b) as being anticipated by Kihara et al. US 5,889,504 (hereinafter "Kihara").

In addition, claims 9 and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kihara et al. US 5,889,504 (hereinafter "Kihara").

New claim 15 has been added. Claim 15 is fully supported in the specification in the previously amended paragraph [0021]; therefore, no new matter is introduced.

Claim Rejections – 35 U.S.C. § 102

The Office Action rejected claims 1-8, 10-13 under 35 U.S.C. 102(b) as being anticipated by Kihara et al. US 5,889,504 (hereinafter "Kihara").

Regarding claim 1, the following added amendment: **"wherein the driving stages are electrically connected in series with the driving stages installed with redundant devices"** is patentable over Kihara. The above added amendment in claim 1 is fully supported inherently by FIG. 2 and paragraphs [0009] – [0011], and [0021]. Therefore, no new matter has been added.

Regarding claims 4 and 10, the following added amendment: **"wherein the redundant stage and the driving stage are electrically connected in serial"**, is patentable over Kihara.

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The above added amendments in claims 4 and 10 are fully supported inherently by FIG. 2 and paragraphs [0009] – [0011], and [0021]. Therefore, no new matter has been added.

On the other hand, Kihara clearly teaches of the driving stages of the right normal shift registers SR3 being coupled, via connecting sections such as S1 (comprising of 71, 72, 73), to the right redundant shift registers SR4 in parallel (as shown in Fig. 7). Furthermore, the aforementioned “in parallel” coupling relationship is fully recited in col. 9, lines 3 – 35 in Kihara: “[w]hen the right normal register SR3 is executing the normal shifting operation, the switch circuit 71 controls the transmission gates 72 and 73 so that the gate 72 is turned on while the gate 73 is turned off. Consequently, the data signal from the right normal register SR3 is supplied via the transmission gate 72 to the right normal register SR3 and right redundant register SR4 of the shift register group 11 of the next stage.

When the right normal register SR3 is not performing the normal shifting operation, on the other hand, the switch circuit 71 controls the transmission gates 72 and 73 so that the gate 72 is turned off while the gate 73 is turned on. As a result, the data signal from the right redundant register SR4 is supplied via the transmission gate 73 to the right normal register SR3 and right redundant register SR4 of the shift register group 11 of the next stage.”

Fig. 4 in Kihara is just a schematic diagram, which is not shown the actually electrical connection of the right normal shift registers SR3 and the the right redundant shift registers SR4. The exact electrical connections are shown in Fig. 7. Accordingly, the right normal shift

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registers SR3 and the the right redundant shift registers SR4 in Kihara are not coupled in serial. Therefore, the present invention teaches away from the cited reference, Kihara.

Additionally, claims 4 and 10 are further patentable over Kihara as both claims include an inherent patentable element of "not having the connecting sections such as S1 which including a switch circuit 71". As shown in FIG. 7 in Kihara, Kihara clearly teaches of having connecting section S1 and switching circuit 71.

Applicants submit that such a display driving circuit as set forth in claim 1, as currently amended, is neither taught, disclosed, nor suggested by Kihara et al. '504 or any of the other cited references, taken alone or in combination. As a result, claim 1 should be allowed.

If independent claim 1 is allowable over the prior art of record, then its dependent claims 2 and 3 are allowable as a matter of law, because these dependent claims contain all features of their respective independent claim 1. *In re Fine*, 837 F.2d 1071 (Fed. Cir. 1988).

Furthermore, Kihara et al. '504 clearly teaches that the redundant device of Kihara (e.g. right redundant register capable of supplying an extra conducting path to transmit an electrical signal from the previous driving stage to the next driving stage via the current stage while the original conduct path (e.g. right normal shift register) in the corresponding driving stage is broken. As shown in Figures 4 and 7 of Kihara et al. '504, each (right or left) normal shift register is correspondingly coupled with a (right or left) redundant shift register. However, as described in the present invention, when each of the driving stage is added with a redundant device, the circuit fabrication cost is increased and the integration density of the electronic

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elements is getting higher and higher. The more electronic elements are integrated in the same size of the chip, the greater short problems due to too many replacement devices are easily produced. Therefore, the fabrication cost and the impacts of the short circuit and broken circuit are all considered. The present invention as claimed in the amended claims 4 and 10 provides a configuration that includes a redundant stage 212, 214 subsequent to N number of the preceding general driving stages. This configuration could dissolve the previous broken or short problems, and reduce some unnecessary fabrication cost. The amendment to claims 4 and 10 do not add any new matter because it is fully supported in FIG. 2 of the present invention.

Applicants submit that such a display driving circuit as set forth in amended claims 4 and 10, as currently added, is neither taught, disclosed, nor suggested by Kihara et al. '504 or any of the other cited references, taken alone or in combination.

Kihara et al. '504 fails to disclose, teach or suggest "redundant stage having a redundant device is installed subsequent to N number of a plurality of preceding general driving stages" as set forth in the amended claims 4 and 10.

Accordingly, the present display driving circuit as set forth in claims 4 and 10 is new and nonobvious over Kihara et al. '504, or any of the other cited references, taken alone or in combination, and thus should be allowed.

If independent claims 4 and 10 are allowable over the prior art of record, then the dependent claims 5~9 and 11~14 are allowable as a matter of law, because these dependent claims contain all features of their respective independent claims 4 and 10.

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Claim Rejections – 35 U.S.C. § 103(a)

Claims 9 and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kihara et al. US 5,889,504 (hereinafter "Kihara").

Regarding claims 9 and 14, pending the allowance of claims 4 and 10 as traversed in the above section based on the "patentable over" instead of the "not anticipated by" standard, dependent claims 9 and 14 are allowable as a matter of law, because these dependent claims contain all the features of their respective independent claims 4 and 10.

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CONCLUSION

For at least the foregoing reasons, it is believed that the pending claims 1-15 are in proper condition for allowance and an action to such effect is earnestly solicited. If the Examiner believes that a telephone conference would expedite the examination of the above-identified patent application, the Examiner is invited to call the undersigned.

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